

Work Order ID 81712

81712

Page 1

March-19-12 8:41:34 AM

Item ID: D4353-041

Accept

N9000040100

Setup Start ***NS1***

Revision ID:

Item Name: Bearpaw Assembly

Stop ***NS2***

Start Date: 29/03/2012 Start Qty: 4.00

4

Cust Item ID:

Required Date: 29/03/2012 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 12/03/19 Tooling:

Date:

Run Start ***NR1***

QC:

Date: SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
----------	--------------

D4353	B
-------	---

120

0.00

120

FLOW WATER JET

Waterjet

Memo

0.00

FLOW CNC Waterjet

Cut Blank as per D4353-1 File

UHMW 1" B/K

130

0.00

130

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1.

1-Inspect material for defects or damage prior to machining

2-Machine as per FolioFB050 and Dwg

FOLIO REV: AA

DWG REV: B

3-Deburr

⑤
JM/B
12-4-9

mk 12/07/09

PTO

W/O: 81712		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D 4353-041 PAR #: _____ Fault Category: Machinist NCR: Yes No DQA: 12/7/19 Date: 12/07/19
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: OK Date: 12/7/20

NCR: 12-1587		WORK ORDER NON-CONFORMANCE (NCR) 391.54						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
12/07/09	136	1 part scrap, 1 hole are oversized R.C. operator error. Did not read instruction class engine. Forgot Bolt Per Molden Part.	S 051042 12/07/09	SCRAP DESTROY NO REPAIR	and 12/07/09	S 12/07/09	S 051042 12/07/09	S 12/07/09

NOTE: Date & initial all entries

Work Order ID 81712

March-19-12 8:41:34 AM

81712

Page 2

Item ID: D4353-041

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Bearpaw Assembly

Start Date: 29/03/2012 Start Qty: 4.00

4

Cust Item ID:

Required Date: 29/03/2012 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

140

QC2- Inspect parts off machine FAI/FAIB

0.00

140

QC

Memo

0.00

Quality Control

150

QC8- Inspect parts - second check

0.00

150

QC

Memo

0.00

Quality Control

152

Pick Kit

0.00

152

Packaging

Memo

0.00

Packaging

on 12/07/09

12 7-10

4

4

4x

EP 12/07/10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

March-19-12 8:41:34 AM

81712

Page 3

Accept

N900040100

Setup Start *NS1*

Stop *NS2*

Item Name: Bearpaw Assembly

Start Date: 29/03/2012 **Start Qty:** 4.00

4

Cust Item ID:

Required Date: 29/03/2012 **Req'd Qty:** 4.00

4

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

153

0.00

153

0.00

Small Fab

Memo

Small Fab

PRESS D4353-3 INSERT INTO BEARPAW

154

QC5- Inspect part completeness to step on W/O.

0.00

154

0.00

QC

Memo

Quality Control

155

Identify as per dwg & Stock Location:

0.00

155

0.00

Packaging

Packaging

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 81712***81712***

Page 4

March-19-12 8:41:34 AM

Item ID: D4353-041

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Bearpaw Assembly

Start Date: 29/03/2012 Start Qty: 4.00

4

Cust Item ID:

Required Date: 29/03/2012 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190

QC21- Final Inspection - Work Order Release

0.00

190

QC

Memo

0.00

Quality Control

12/17/17 *[Signature]*
MF
12-07-17

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

March-19-12 8:41:37 AM

Page 1

Work Order ID: 81712

81712

Parent Item: D4353-041

D4353-041

Parent Item Name: Bearpaw Assembly

Start Date: 29/03/2012

Required Date: 29/03/2012

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV:A NEW ISSUE 11-04-12 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MUHMWB10		Purchased	No				sf	642.5059		20			

MUHMWB10

UHMW 1" Black

**

Location	Loc Qty	Loc Code
MAT018	385.3815789	
120035	67.7815789	
120401	197.6	
120972	120	
MAT019	257.1243158	
117321	74.6	
117738	93.28	
117819	83.3	
118814	1.5	
119145	4.44431579	

D4353-3

Manufactured No

m121277

Each 2.0000

D4353-3

Bearpaw Insert

**

Location	Loc Qty	Loc Code
GA	2	
71095	2	

m121277

4

12/07/10

5
Jm
12-4-9

B80241 (4)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	81712
Description: Bearpaw		Part Number:	D4353-1
Inspection Dwg: D4353	Rev: B	Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.38	+/-0.030	0.375	—		Vern M1-06	
7.375	+/-0.010	7.375	—		"	
12.50	+/-0.030	12.500	—		"	
1.38	+/-0.030	1.370	—		"	
3.813	+/-0.010	3.813	—		"	
24.00	+/-0.030	24.000	—		M-type M1-04	
10.09	+/-0.030	10.090	—		"	
1.00	+/-0.030	1.000	—		Vern M1-06	
6.150	+/-0.010	6.150	—		"	
3.038	+/-0.010	3.038	—		"	
6.563	+/-0.010	6.563	—		M-type M1-04	
9.250	+/-0.010	9.250	—		"	
27.00	+/-0.030	27.000	—		"	
1.25	+/-0.030	1.265	—		Vern M1-06	
0.30 x 45°	+/-0.030	0.280 x 45°	—		"	
1.38	+/-0.030	1.375	—		"	
0.63	+/-0.030	0.636	—		"	
0.95	+/-0.030	0.960	—		"	
R0.25	+/-0.030	R.250	—		R-6	
0.70	+/-0.030	0.700	—		Vern M1-06	
0.07 x 45°	+/-0.030	0.063 x 45°	—		"	
Ø0.650	+/-0.010	Ø0.650	—		"	
Ø0.261	+0.006/-0.001	Ø0.261	—		"	
0.400	+/-0.010	0.400	—		"	
4.750	+0.012/-0.000	4.750	—		"	
4.000	+0.012/-0.000	4.000	—		"	
5.75	+/-0.030	5.760	—		"	
0.63	+/-0.030	0.630	—		"	
0.57	+/-0.030	0.570	—		"	
0.25	+/-0.030	0.255	—		"	
0.45	+/-0.030	0.450	—		"	
0.06 x 45°	+/-0.030	0.040 x 45°	—		"	
R0.25	+/-0.030	R.250	—		"	

+0.0012
-0.0000
+0.0012
-0.0000

Measured by:	JRF	Audited by:	JR	Preliminary Approval:	
Date:	12/07/09	Date:	12-7-10	Date:	

Rev	Date	Change	Revised by	Approved
A	11-07-08	New Issue		

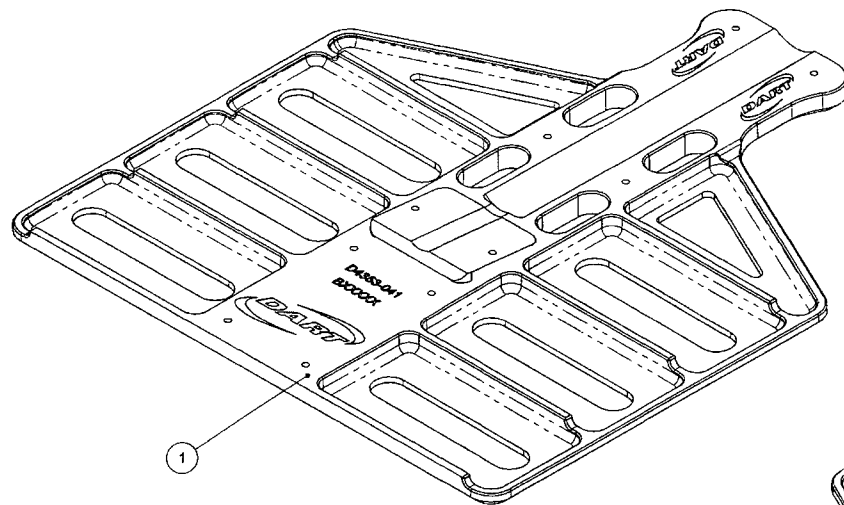
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

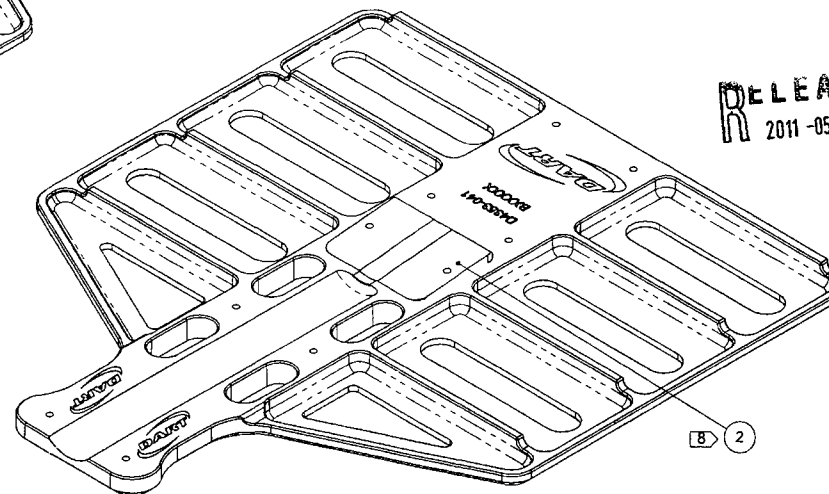
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D4353-041 429 BEARPAW ASSEMBLY



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 81712 MLC

12/03/19

RELEASED
2011-05-24
MPD

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 7.45 lbs
- 8) PRESS FIT



ITEM	QTY	P/N	DESCRIPTION
	X	D4353-041	429 BEARPAW ASSEMBLY
1	1	D4353-1	429 BEARPAW
2	1	D4353-3	429 BEARPAW INSERT

B	SHT 1 WEIGHT CORRECTED WAS 8.24 lbs. SHTS 1-3 DART 1 LOGOS UPDATED SHT 2 ZONE B8, AFT POCKET REDUCED, RIB INCREASED IN HEIGHT. SHT 3 SECTS. B, C & D RIB INCREASED IN HEIGHT.	AJS	11.04.26
A	NEW ISSUE	AJS	11.03.24
REV.	DESCRIPTION	BY	DATE
DESIGN	AJS		
DRAWN	AJS		
CHECKED	MP		
MFG. APPR.	MP		
APPROVED	MP		
DE APPR.	MP		
DATE	11.04.26		

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO.
D4353

TITLE
429 BEARPAW ASSEMBLY

REV. B
SHEET 1 OF 4
SCALE
NTS

COPYRIGHT © 2011 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD

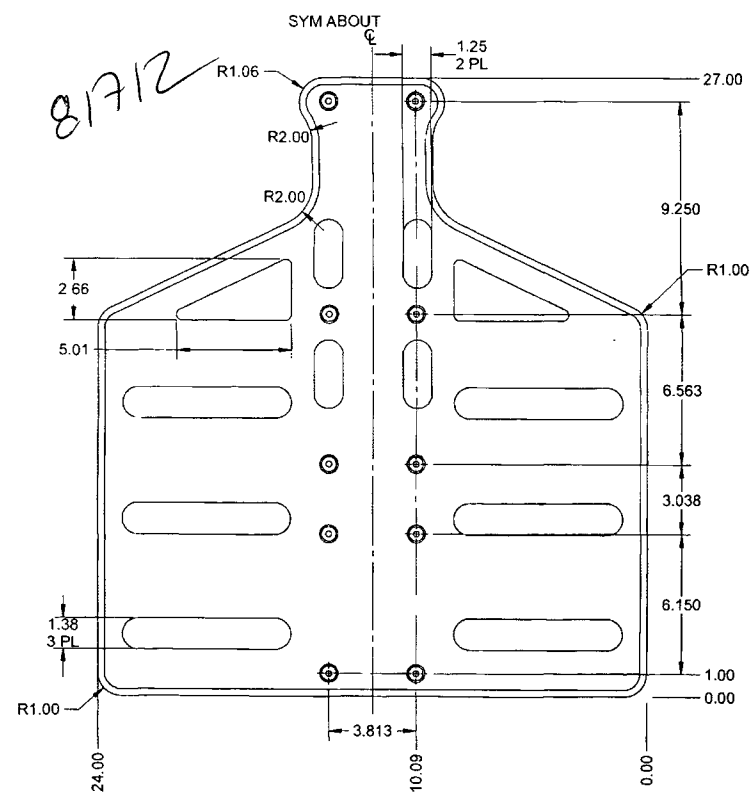
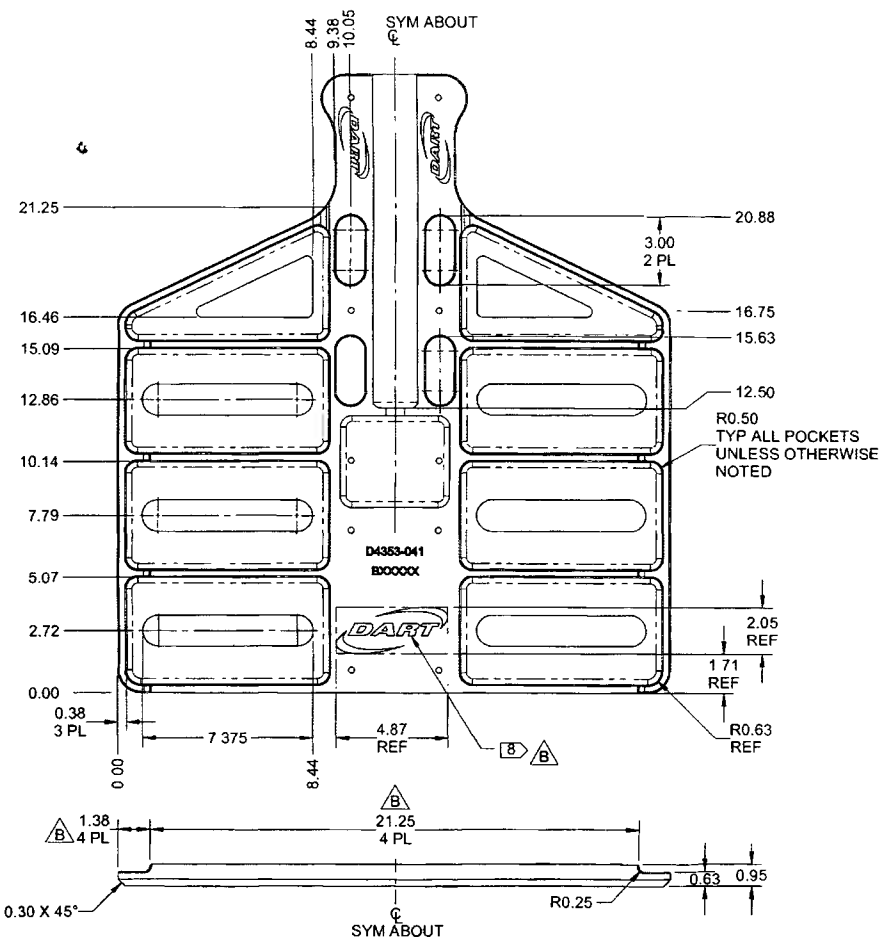
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D4353-1 429 BEARPAW

RELEASED
2011-05-04
NM

NOTES:

- 1) MATERIAL: UHMW BLACK PER SPEC CONTROL DRAWING D2689, 1.000 THICK.
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: ENGRAVE WITH DART ASSEMBLY P/N "D4353-041" AND B/N "BXXXXX" 0.005 - 0.010 DP AS SHOWN
- 7) WEIGHT: 7.07 lbs
- 8) ENGRAVE "DART" LOGO AS SHOWN 0.003 - 0.005 DP.

DESIGN	AJS	DART AEROSPACE LTD	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D4353	SHEET 2 OF 4
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	429 BEARPAW ASSEMBLY	NTS
DATE	11.04.26	COPYRIGHT © 2011 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR FOR COMMUNICATIONS TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

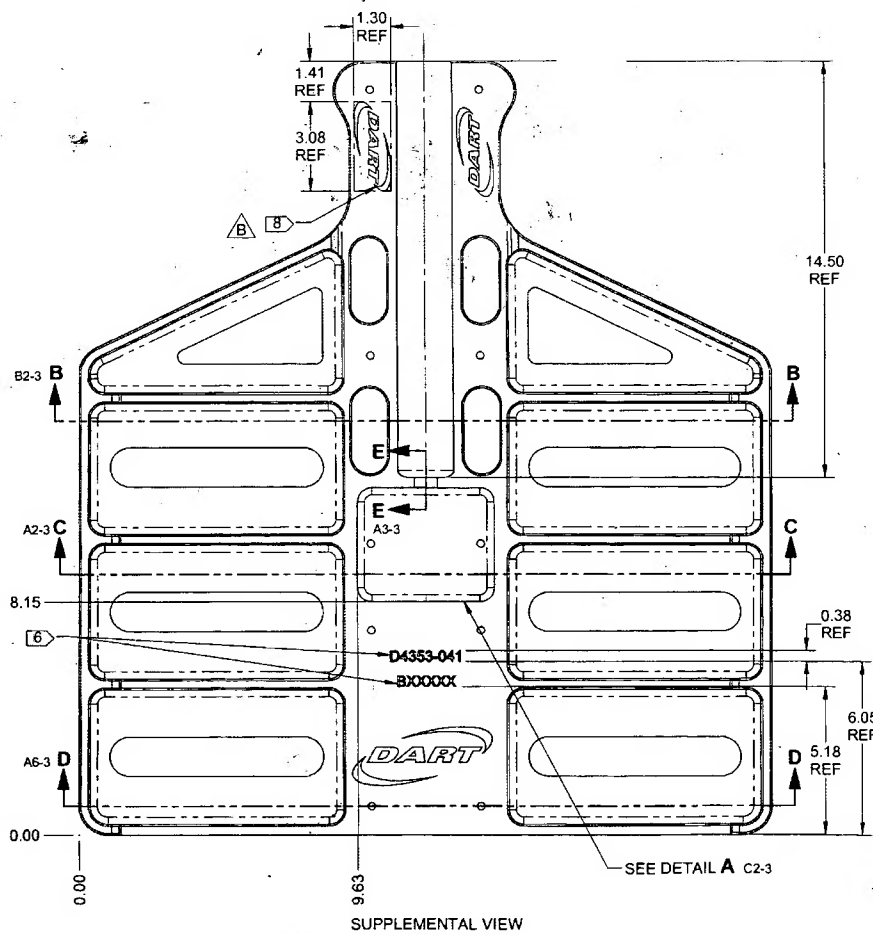
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

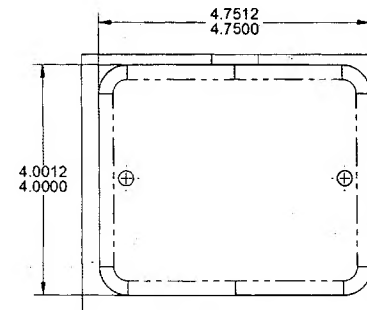
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

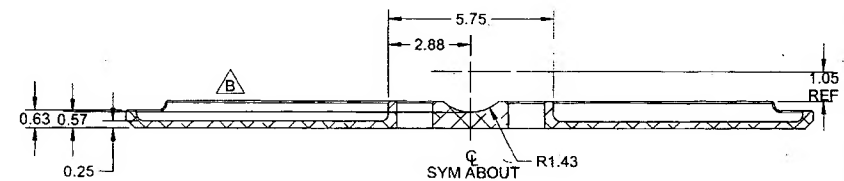
NOTE: Date & initial all entries



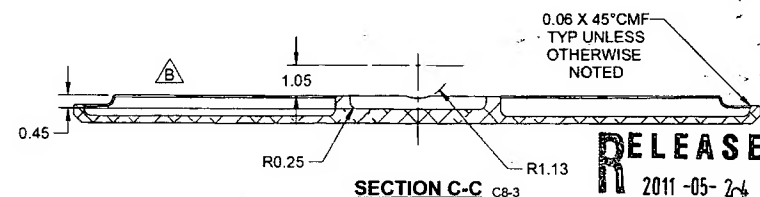
81712



DETAIL A A5-3
(SCALE 2X)



SECTION B-B C8-3



SECTION C-C C8-3



SECTION E-E C6-3
(SCALE 2X)

DESIGN	AJS	DART AEROSPACE LTD	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	AP	DRAWING NO.	REV. B
MFG. APPR.	AP	D4353	SHEET 3 OF 4
APPROVED	AP	TITLE	SCALE
DE APPR.	AP	429 BEARPAW ASSEMBLY	NTS
DATE	11.04.26	COPYRIGHT © 2011 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRINTED AND CONFIDENTIAL NOTICE IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

RELEASED
2011-05-24

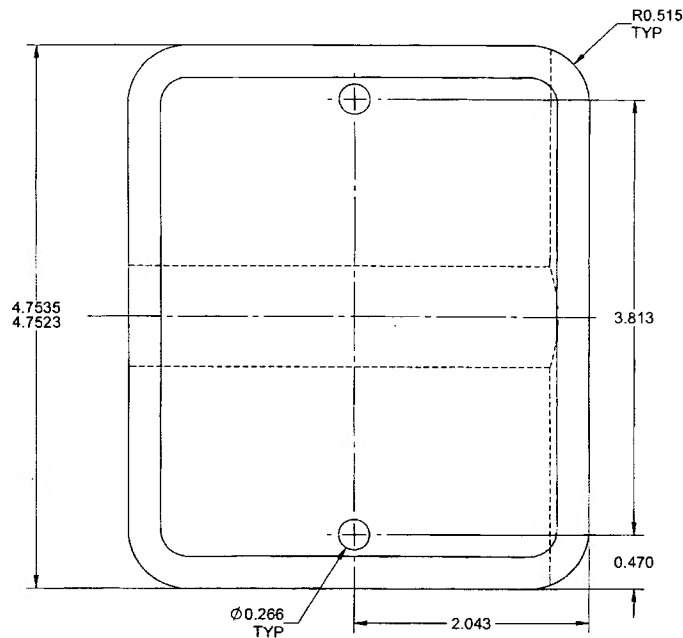
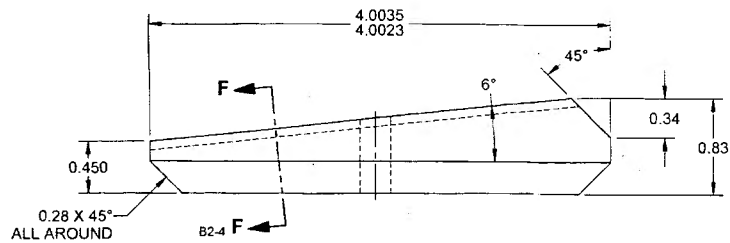
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

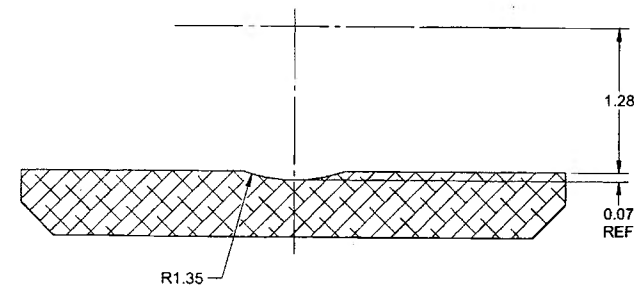
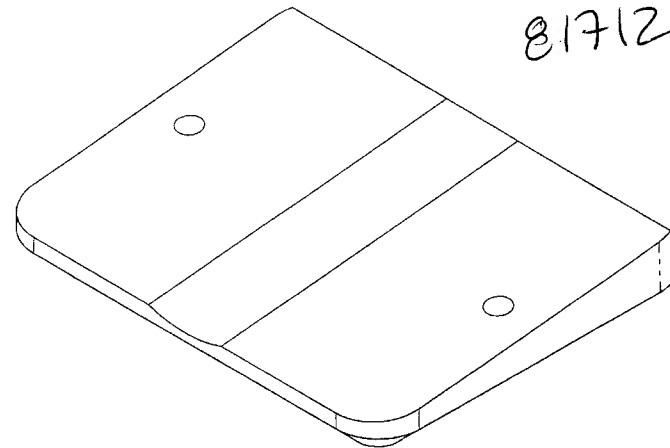
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D4353-3 429 BEARPAW INSERT



SECTION F-F C7-4

RELEASED
2011-05-24

- NOTES:**
- 1) MATERIAL: UHMW BLACK PER SPEC CONTROL DRAWING D2689, 1.000 THICK.
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: N/A
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: 0.38 lbs

DESIGN	AJS	DART AEROSPACE LTD	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D4353	SHEET 4 OF 4
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	429 BEARPAW ASSEMBLY	NTS
DATE	11.04.26	COPYRIGHT © 2011 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE SAME CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries